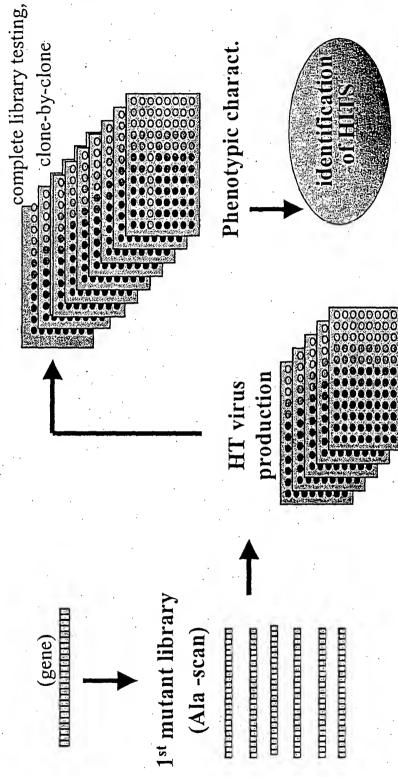
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<u>lst Round</u>: screening of mutants (full length Ala-scan,



identification of LEADS

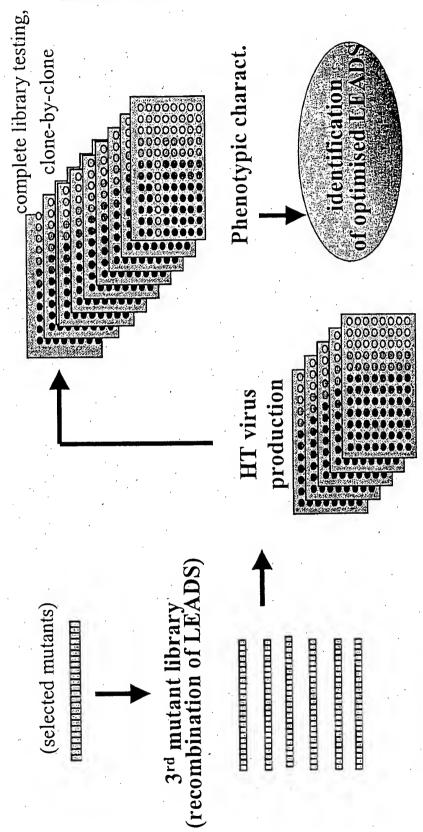
anna i balesa i separa a susa i

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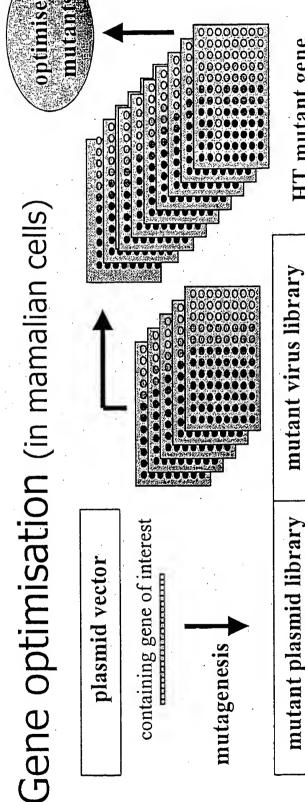
complete library testing, <u>2nd Round</u>: screening of mutants at (surrounding) HIT positions clone-by-clone Phenotypic charact. production HT virus 2nd mutant library (at HIT sites) RESERVATION OF PROPERTY OF THE ortings three artises to the (gene)

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<u>3rd Round</u>: screening of recombinants between LEADS



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transfer & analysis HT mutant gene

complete library testing, clone-by-clone

(in mmamalian cells)

HT virus vector

********************************* SZERSES SESSES SESSES SESSES

production

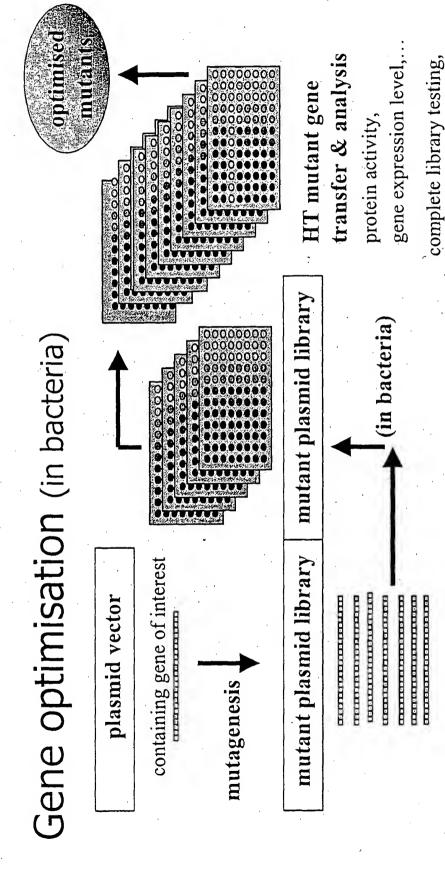
gene expression level,.

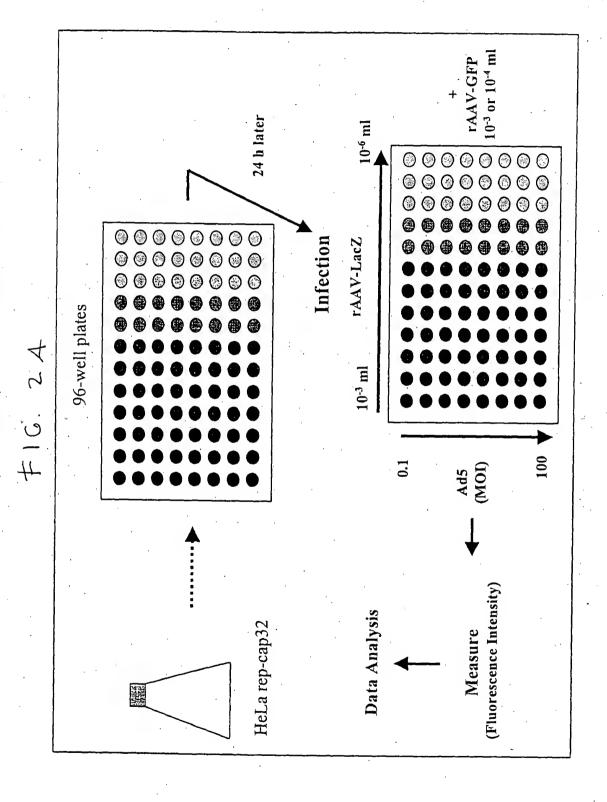
protein activity,

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clone-by-clone

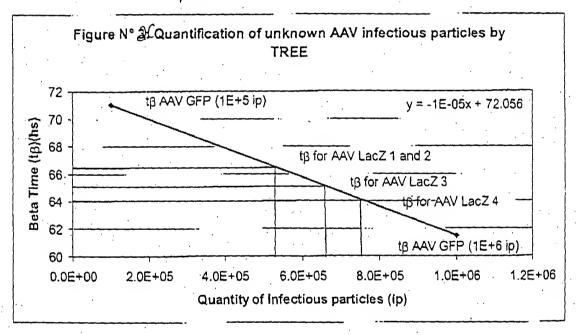




TRUE REMANDER WITE & MANDLIFE LLIT TRUE HIGH THROUGHPUT DIRECTED EVOLUTION RATIONAL MUTACENESIS Docket No.: 37851-911, Manuel Vega Filed: December 17, 2003

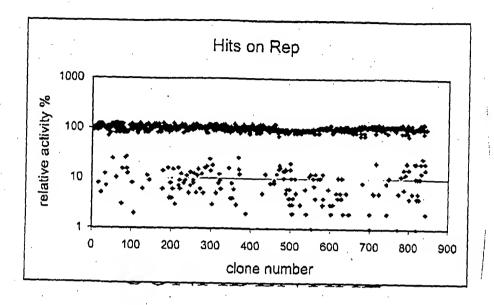
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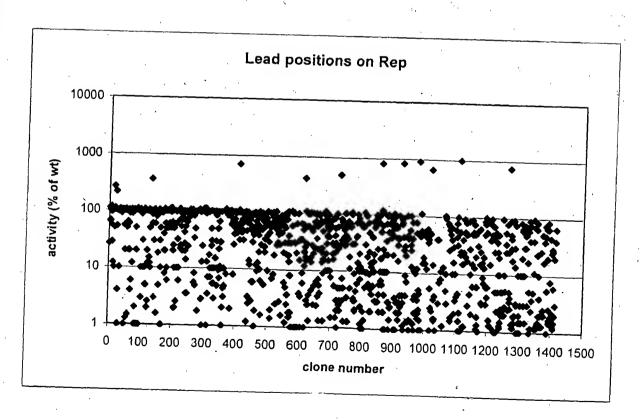


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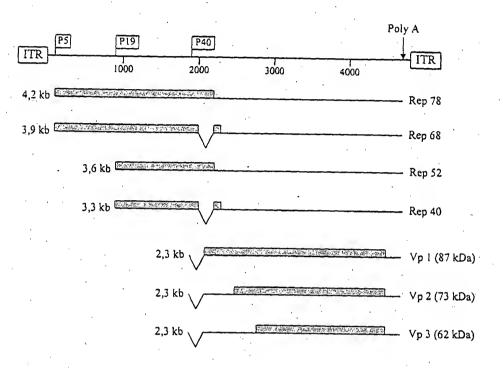


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FIGURE 4



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FIGURE 5A

		2.0	2.0	4.0	50	60	
	10	20	30	40			60
1	MPGFYEIVIKVPSDLDE	HLPGISDSF	/SWVAEKEWE	T DDCCMOLY	IL LEOYDI WAYE	MT O	60
2	MPGFYEIVIKVPSDLDE	HLPGISDSF	NWVAEKEWE	TLPPOSUMULI	IL TECAPLI VAE	KLQ KLQ	60
3	MPGFYEIVLKVPSDLDE	HLPGISNSFY	NWVAEKEWE	TIPPOSOMOPI	IL TEONOL WAR	KLQ KLO	
4	MPGFYEIVLKVPSDLDE	HLPGISNSFY	NWVAEKEWE	SL <i>PP</i> DSDMDPN	IL TECAPLITAE	KTQ KTQ	60
5	MPGFYEIVLKVPSDLDE	HL P GISDSF	/SWVAEKEWE	SLPPDSDMDLN	ILIEQAPLTVAE	KŁQ	60
6	MPGFYEIVIKVPSDLDG	HL P GISDSFV	/NWVAEKEWE	EL <i>PP</i> DSDMDLN	ILTEQAPLIVAE	KLQ	60
7	MATFYEVIVRVPFDVEE	HL P GISDSFV	JD W VT G QIWE	ELPPESDLNLI	LVEQPQLTVAD	RIR	60
С	M**FYE**:*VP*D***	HL P GIS+SFV	J: W V***WI	EL pp *SD**+*	L*EQ**LTVA*	***	
	70	0.0	90	100	110	120	
-	70 RDFLVQWRRVSKAPEALI	80 REVOREV CE					120
1	RDFLVQWRRVSKAPEALI	CEAOCERCE:	OTENDUTUVI	TIGVICINE CHIVIC	EDEL'CULDURIY	OTT 1	120
2	REFLVEWRRVSKAPEAL!	EEVQEEVC E	TINDITTO I	STIGVICHVIC	SDAMCULKEKIW SULDOĞIKDUDA	יוסיד '	120
3	REFLVEWRRVSKAPEAL	FFVQFENGE.	TICUDUVIII	STIGV K SHIV V	SKI ARČIKEKI VI	TOT 1	120
4	REFLVEWRRVSKAPEAL	FFVQFEKGE.	LICUDUALI	STIGVKSMVV(SKI ARČIKEKIM	יותו י	120
5	RDFLTEWRRVSKAPEAL	FF VQF E KGD:	TATEL WILL TA	51 VG V <i>X SI</i> NI V V C	TINGGINDING	OPT :	120
6	RDFLTEWRRVSKAPEAL	FFVQFEKGE:	OXEDUA 1001 11	EDCCLCCMILC	TOVICOTOXOLVI TUVICOTOXIVOT	ČKI .	119
7	RVFLYEWNKFSKQ-ESK	FFVQFEKGSI	SYPHLHILVE	TIPGIDOMATIC	* 1* . *CO1 *I *	.	LLJ
С	R:FL++W***SK**E**	FFVQFEKG+	:YFH*H:L+1	ET:G^^SMV:C	ък::2ÖI:: "п.	::"	
	130 14	40	150	160	170 1	80	
1	YRGIEPTLPNWFAVTKT					ACL :	180
2	YRGIEPTLPNWFAVTKT	DNG AGGGNK	MDECALDIN	VI.I.PKTOPEL(WAWTNMEEYIS	ACI.	180
3	YRGVEPQLPNWFAVTKT	RNGAGGGNR DNGAGGGNRI	WINDCALDIN.	VI.I.DKTOPEL(S.IYOGMIATWAWG	ACT.	180
	YRGVEPQLPNWFAVTKT	RINGAGGGIAN	WIDDCITEN.	VI.I.DK TOD FI.(OWAWTNMDO Y I.S	ACI.	180
4	YRGVEPQLPNWFAVTKT	RNGAGGGNR DNGACCCNIKI	WADDCITEN.	ATT DRACOBET	ZIYOOMNTWAW!	ACI.	180
5	YRGIEPTLPNWFAVTKT	CNGAGGGNK DNGACCCNIVI	ANDECATEM:	VI.I.DKMOPEL(JWZWTNMEO Y LS	ACT.	180
6	FQGIEPQINDWVAITKV	KNGAGGNA VV CCANV	WOECTIEN.	VII DENI QEBU(JWAWTNI.DE Y KI.	ΛCD .	177
7	**G:EP:***W*A*TK*	KKGGANK	VVDSGIIPA.	TIPEVAČECI(₹∙∙ ₹ ✓MWM TIADDT I VD	Λ*T.	± / /
C	**G:EP: * * *W*A*TK*	* * * * GG * IN K	VVD:^XIP^.	エロロトレックトロコイ	SMWM TIV. : : I :	A. n	
	190	200		220		240	
1		200 OTOEONKENI	210	220	230	240	240
1	NLAERKRLVAOHLTHVS	QTQEQNKEN!	210 LNPNSDAPV	220 IRSKT S ARYMI	230 EL <i>V</i> GW L VD R GI T	240 SEK :	240 240
2	NLAERKRLVAQHLTHVS	QTQEQNKEN! OTOEONKEN!	210 LNPNSDAPVI LNPNSDAPVI	220 IRSKT S ARYMI IRSKT S ARYMI	230 EL v gw l vd r gi <i>t</i> EL v gw l vd r gi <i>t</i>	240 SEK	
2	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAOHLTHVS	QTQEQNKEN QTQEQNKEN OTQEONKEN	210 LNPNSDAPVI LNPNSDAPVI ONPNSDAPVI	220 IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT	240 SEK SEK	240
2 3 4	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAOHLTHVS	QTQEQNKEN QTQEQNKEN QTQEQNKEN OTOEONKEN	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI	220 IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT	240 SEK SEK SEK	240 240
2 3 4 5	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAOHLTHVS	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI OTQEQNKENI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI	220 IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT	240 SEK SEK SEK SEK	240 240 240 240
2 3 4 5 6	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAOHLTHVS	OTOEONKEN: OTOEONKEN: OTOEONKEN: OTOEONKEN: OTOEONKEN:	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI	220 IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDKGIT	240 SEK SEK SEK SEK SEK	240 240 240 240 240
2 3 4 5 6 7	NLAERKRLVAQHLTHVS: NLAERKRLVAHDLTHVS: NLAERKRLVAQHLTHVS: NLAERKRLVAQHLTHVS: NLAERKRLVAQHLTHVS: NLTERKRLVAQHLTHVS: NLEERKRLVAOFLAESS:	QTQEQNKEN; QTQEQNKEN; QTQEQNKEN; QTQEQNKEN; QTQEQNKEN; QTQEQNKEN; QTQEQNKEN; ORS-OEAAS;	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI OREFSADPVI	220 IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDKGIT ALVNWLVEHGIT	240 SEK SEK SEK SEK SEK SEK	240 240 240 240
2 3 4 5 6	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAOHLTHVS	QTQEQNKEN; QTQEQNKEN; QTQEQNKEN; QTQEQNKEN; QTQEQNKEN; QTQEQNKEN; QTQEQNKEN; ORS-OEAAS;	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI OREFSADPVI	220 IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI IRSKT S ARYMI	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDKGIT ALVNWLVEHGIT	240 SEK SEK SEK SEK SEK SEK	240 240 240 240 240
2 3 4 5 6 7	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q***Q****	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QREFSADPVI +***S**PVI	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSARYMI IKSKTSYMYMI IKSKTSYMYMI	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ALVNWLVEHGIT *LV*WLV*+GIT	240 SEK SEK SEK SEK SEK SEK SEK	240 240 240 240 240 240 236
2 3 4 5 6 7 C	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S 250 OWIOEDQASYISFNAAS	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q***Q****	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QREFSADPVI +***S**PVI	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSARYMI IKSKTSYMYMI IKSKTSYMYMI I*SKTS**YM	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ALVNWLVEHGIT *LV*WLV*+GIT	240 SEK SEK SEK SEK SEK SEK SEK SEK	240 240 240 240 240 236
2 3 4 5 6 7 C	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S QUIQEDQASYISFNAAS OWIOEDOASYISFNAAS	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q***Q**** 260 NSRSQIKAAI NSRSQIKAAI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QREFSADPVI +***S**PVI 270 LDNAGKIMAI	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSARYMI IKSKTSYMYMI IKSKTSVYMYMI I*SKTS**YM	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDKGIT ALVNWLVEHGIT *LV*WLV*+GIT 290 GPAPPADIKTNR	240 SEK SEK SEK SEK SEK SEK SEK SEK SEK 300 LIYR	240 240 240 240 240 240 236
2 3 4 5 6 7 C	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS OWIOEDOASYISFNAAS	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS - QEAASI Q***Q**** 260 NSRSQIKAAI NSRSQIKAAI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QREFSADPVI +***S**PVI 270 LDNAGKIMAI LDNAGKIMAI	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSYMYMI IKSKTSVYMI I*SKTSVYMI L*SKTSVYMI L*KSAPDYLVO LTKSAPDYLVO	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDKGIT ALVNWLVEHGIT *LV*WLV*+GIT 290 GPAPPADIKTNR GPAPPADIKTNR	240 SEK SEK SEK SEK SEK SEK SEK SEK 300 LIYR LIYR	240 240 240 240 240 236
2 3 4 5 6 7 C	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS OWIOEDOASYISFNAAS	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS - QEAASI Q***Q**** 260 NSRSQIKAAI NSRSQIKAAI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QREFSADPVI +***S**PVI 270 LDNAGKIMAI LDNAGKIMAI	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSYMYMI IKSKTSVYMI I*SKTSVYMI L*SKTSVYMI L*KSAPDYLVO LTKSAPDYLVO	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDKGIT ALVNWLVEHGIT *LV*WLV*+GIT 290 GPAPPADIKTNR GPAPPADIKTNR	240 SEK SEK SEK SEK SEK SEK SEK SEK 300 LIYR LIYR	240 240 240 240 240 236
2 3 4 5 6 7 C 1 2 3 4	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS OWIOEDOASYISFNAAS	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q***Q**** 260 NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QREFSADPVI +***S**PVI LDNAGKIMAI LDNASKIMAI LDNASKIMSI LDNASKIMSI LDNASKIMSI	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSARYMI IKSKTSARYMI IKSKTSVYMI LTKSAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ALVNWLVEHGIT *LV*WLV*+GIT 290 GPAPPADIKTNR GPAPPADIKTNR GSNPPEDITKNR GSNPPEDITKNR	240 SEK SEK SEK SEK SEK SEK SEK SEK SIYR IYR IYR IYQ IYR	240 240 240 240 236 300 300 300
2 3 4 5 6 7 C 1 2 3 4 5	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q***Q**** 260 NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QREFSADPVI +***S**PVI LDNAGKIMAI LDNASKIMAI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNASKIMSI	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSARYMI IKSKTSVYMI LTKSAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ALVNWLVEHGIT 290 GPAPPADIKTNR GPAPPADIKTNR GSNPPEDITKNR GSNPPEDITKNR GQNPPEDISSNR	240 SEK SEK SEK SEK SEK SEK SEK SEK SIYR IIYR IIYR IIYR	240 240 240 240 236 300 300 300 300
234567C 123456	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q***Q**** 260 NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QREFSADPVI +***S**PVI LDNAGKIMAI LDNASKIMAI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNASKIMSI	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSARYMI IKSKTSVYMI LTKSAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ALVNWLVEHGIT 290 GPAPPADIKTNR GPAPPADIKTNR GSNPPEDITKNR GSNPPEDITKNR GQNPPEDISSNR	240 SEK SEK SEK SEK SEK SEK SEK SEK SIYR IIYR IIYR IIYR	240 240 240 240 236 300 300 300 300 300
2 3 4 5 6 7 C 1 2 3 4 5	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS OWIOEDOASYISFNAAS	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q***Q**** 260 NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI NSRSQIKAAI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QREFSADPVI +***S**PVI LDNAGKIMAI LDNAGKIMAI LDNASKIMSI	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSARYMI IKSKTSARYMI IKSKTSARYMI IKSKTSV LTKSAPDYLV LTKTAPDYLV	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ALVNWLVEHGIT 290 GPAPPADIKTNR GPAPPADIKTNR GSNPPEDITKNR GSNPPEDITKNR GQNPPEDISSNR GQQPVEDISSNR	240 SEK SEK SEK SEK SEK SEK SEK SIYR IIYR IIYR IIYR IIYR IIYR IIYR	240 240 240 240 236 300 300 300 300 300 300
234567C 1234567	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S QWIQEDQASYISFNAAS	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q***Q**** 260 NSRSQIKAAI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QREFSADPVI +***S**PVI LDNAGKIMAI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNAGKIMSI	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSARYMI IKSKTSARYMI IKSKTSVYMI 280 LTKSAPDYLVO LTKSAPDYLVO LTKTAPDYLVO LTKSAVDYLVO LTKSAVDYLVO	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ALVNWLVEHGIT 290 GPAPPADIKTNR GPAPPADIKTNR GSNPPEDITKNR GSNPPEDITKNR GQNPPEDISSNR GQQPVEDISSNR GSSVPEDISKNR G::**+DI::NR	240 SEK SEK SEK SEK SEK SEK SEK SEK SITYR	240 240 240 240 236 300 300 300 300 300 300
234567C 1234567C	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S QUIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEXPASSYLSFNSTG QWIQEXPSYLSFNSTG	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q***Q**** 260 NSRSQIKAAI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNEFSADPVI +***S**PVI 270 LDNAGKIMAI LDNAGKIMAI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNATKIMSI LDNATKIMSI LDNA: KIM+I	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSARYMI IKSAPDYLVO LTKSAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKTAPDYLVO LTKSAVDYLVO LTKSAVDYLVO LTK: A*DYLVO	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ALVNWLVEHGIT *LV*WLV*+GIT 290 EPAPPADIKTNR EPAPPADIKTNR GSNPPEDITKNR GSNPPEDITKNR GQNPPEDISSNR GQQPVEDISSNR GSSVPEDISKNR G::**+DI::NR	240 SEK SEK SEK SEK SEK SEK SEK SITYR SITY	240 240 240 240 240 236 300 3300 3300 3300 300 3296
234567C 1234567C	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S QUIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEXPASYISFNASS QWIQEXPASYISFNASS QWIQEXPASYISFNASS QWIQEXPASYISFNASS	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q***Q**** 260 NSRSQIKAAI OSRSQIKAAI OSRSQIKAAI OSRSQIKAAI OSRSQIKAAI OSRSQIKAAI OSRSQIKAAI OSRSQIKAAI OSRSQIKAAI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNEFSADPVI +***S**PVI 270 LDNAGKIMAI LDNAGKIMAI LDNASKIMSI LDNASKIMSI LDNAGKIMSI	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSARYMI IKSAPDYLVO LTKSAPDYLVO LTKTAPDYLVO	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ALVNWLVEHGIT *LV*WLV*+GIT 290 EPAPPADIKTNR EPAPPADIKTNR GSNPPEDITKNR GSNPPEDITKNR GSNPPEDITKNR GSNPPEDISSNR GQNPPEDISSNR GQSVVEDISKNR G::**+DI::NR 350 AIAHAVPFYGCV	240 SEK SEK SEK SEK SEK SEK SEK SEK SITYR	240 240 240 240 2240 236 300 300 300 300 300 300 300 300 300 3
234567C 1234567C 12	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S 250 QWIQEDQASYISFNAAS. QWIQEXQYSYLSFNSTG. QWIQE*Q*SY*SFN*** 310 ILELNGYEPAYAGSVFL ILELNGYDPAYAGSVFL	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q***Q**** 260 NSRSQIKAAI OSRSQIKAAI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNEFSADPVI +***S**PVI 270 LDNAGKIMAI LDNASKIMSI	220 IRSKTSARYMI IRSKTNIAEI ATTGKTNIAEI	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ALVNWLVEHGIT *LV*WLV*+GIT 290 EPAPPADIKTNR EPAPPADIKTNR GSNPPEDITKNR GSNPPEDITKNR GSNPPEDITKNR GQNPPEDISSNR GQQVEDISSNR GSSVPEDISKNR G::**+DI::NR 350 AIAHAVPFYGCV	240 SEK SEK SEK SEK SEK SEK SEK SEK SITYR	240 240 240 240 2240 236 300 300 300 300 300 300 300 300 300 3
234567C 1234567C 123	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQHLTHVS NLEERKRLVAQFLAESS NL+ERKRLVA*+L***S 250 QWIQEDQASYISFNAAS. QWIQEDQASYISFNAAS. QWIQEDQASYISFNAAS. QWIQEDQASYISFNAAS. QWIQEDQASYISFNAAS. QWIQEDQASYISFNAAS. QWIQEDQASYISFNAAS. QWIQEDQASYISFNAAS. QWIQEDQASYISFNAAS. QWIQEDQASYISFNAS. QWIQEDQASYISFNAS. QWIQEDQASYISFNAS. QWIQEXYSFNSTG. QWIQE*Q*SY*SFN*** 310 ILELNGYEPAYAGSVFL ILELNGYDPAYAGSVFL ILELNGYDPAYAGSVFL ILELNGYDPAYAGSVFL	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q***Q**** 260 NSRSQIKAAI OSRSQIKAAI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QREFSADPVI +***S**PVI 270 LDNAGKIMAI LDNASKIMSI LD	220 IRSKTSARYMI IRSKTNIAEI IRSKTNIAEI IRSKTNIAEI IRSKTNIAEI IRSKTNIAEI IRSKTNIAEI	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ALVNWLVEHGIT *LV*WLV*+GIT 290 EPAPPADIKTNR EPAPPADIKTNR ESNPPEDITKNR GSNPPEDITKNR GQNPPEDISSNR GQQVEDISSNR GSSVPEDISKNR G::**+DI::NR 350 AIAHAVPFYGCV AIAHAVPFYGCV	240 SEK SEK SEK SEK SEK SEK SEK SEK SITYR	240 240 240 240 2240 236 300 300 300 300 300 300 300 300 300 3
234567C 1234567C 1234	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQHLTHVS NLEERKRLVAY+L**S 250 QWIQEDQASYISFNAAS LUELNGYDPAYAGSVFL ILELNGYDPAYAGSVFL ILELNGYDPAYAGSVFL ILELNGYDPOYAASVFL	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTS-QEAASI Q***Q**** 260 NSRSQIKAAI S20 GWAQKRFGKI GWAQKKFGKI GWAQKKFGKI GWAOKKFGKI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QREFSADPVI +***S**PVI 270 LDNAGKIMAI LDNAGKIMAI LDNASKIMSI LD	220 IRSKTSARYMI IRSKTNIAEI IRSKTNIAEI IRSKTNIAEI IRSKTNIAEI IRSKTNIAEI IRSKTNIAEI IRSKTNIAEI IRSKTNIAEI IRSKTNIAEI	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDKGIT ALVNWLVEHGIT *LV*WLV*+GIT 290 GPAPPADIKTNR GPAPPADIKTNR GSNPPEDITKNR GSNPPEDITKNR GQQPVEDISSNR GQQPVEDISSNR GSSVPEDISKNR G::**+DI::NR 350 AIAHAVPFYGCV AIAHAVPFYGCV AIAHAVPFYGCV	240 SEK SEK SEK SEK SEK SEK SEK SEK SITYR	240 240 240 240 2240 236 300 300 300 300 300 360 360 360 360
234567C 1234567C 12345	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQHLTHVS NLEERKRLVA*+L**S 250 QWIQEDQASYISFNAAS. LUELNGYDPAYAGSVFL ILELNGYDPAYAGSVFL ILELNGYDPQYAASVFL ILENGYDPQYAASVFL ILEMGYDPQYAASVFL	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS - QEAASI Q***Q**** 260 NSRSQIKAAI SQUAQKKFGKI GWAQKKFGKI GWAQKKFGKI GWAQKKFGKI GWAQKKFGKI GWAQKKFGKI GWAQKKFGKI GWAQKKFGKI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QREFSADPVI +***S**PVI 270 LDNAGKIMAI LDNAGKIMAI LDNASKIMSI LD	220 IRSKTSARYMI IRSKTNIAEI IRSKTNIAEI IRSKTNIAEI IRTGKTNIAEI	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDKGIT ALVNWLVEHGIT *LV*WLV*+GIT 290 GPAPPADIKTNR GPAPPADIKTNR GSNPPEDITKNR GSNPPEDITKNR GQQPVEDISSNR GQQPVEDISSNR GSSVPEDISKNR G::**+DI::NR 350 AIAHAVPFYGCV AIAHAVPFYGCV AIAHAVPFYGCV AIAHAVPFYGCV	240 SEK SEK SEK SEK SEK SEK SEK SEK SITT SITT SITT SITT SITT SITT SITT SIT	240 240 240 240 2240 236 300 300 300 300 300 360 360 360 360 3
234567C 1234567C 123456	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQHLTHVS NLEERKRLVAY+L**S 250 QWIQEDQASYISFNAAS. LUELNGYDPAYAGSVFL ILELNGYDPAYAGSVFL ILELNGYDPQYAASVFL ILELNGYDPQYAASVFL ILELNGYDPQYAASVFL ILELNGYDPQYAASVFL ILELNGYDPQYAASVFL	QTQEQNKENI QRS-QEAASI Q***Q**** 260 NSRSQIKAAI GWAQKRFGKI GWAQKKFGKI GWATKKFGKI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNEFSADPVI +***S**PVI 270 LDNAGKIMAI LDNAGKIMAI LDNASKIMSI LD	220 IRSKTSARYMI IRSKTNIAEI ATTGKTNIAEI ATTGKTNIAEI ATTGKTNIAEI ATTGKTNIAEI ATTGKTNIAEI ATTGKTNIAEI ATTGKTNIAEI ATTGKTNIAEI	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDKGIT ALVNWLVEHGIT *LV*WLV*+GIT 290 GPAPPADIKTNR GPAPPADIKTNR GSNPPEDITKNR GSNPPEDITKNR GQQPVEDISSNR GQQPVEDISSNR GSSVPEDISKNR G::**+DI::NR 350 AIAHAVPFYGCV	240 SEK SEK SEK SEK SEK SEK SEK SEK SITYR	240 240 240 240 240 236 300 300 300 300 300 360 360 360 360 3
234567C 1234567C 1234567	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLEERKRLVAQHLTHVS NLEERKRLVAQHLTHVS NLEERKRLVAQHLTHVS NLEERKRLVAY+L**S 250 QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAAS QWIQEDQASYISFNAS QWIQEDQASYISFNAS UIQEDQASYISFNAS QWIQEDQASYISFNAS UILELNGYDPAASVFL ILELNGYDPAYAGSVFL ILELNGYDPQYAASVFL ILENGYDPQYAASVFL IFEMNGYDPAYAGSILY	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q****Q***** 260 NSRSQIKAAI GWAQKRFGKI GWAQKRFGKI GWAQKKFGKI GWACKFGKI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNEFSADPVI +***S**PVI 270 LDNAGKIMAI LDNAGKIMAI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNATKIMSI LONATKIMSI LONATKIMLFGPI RNTIWLFGPI	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSARYMI 280 LTKSAPDYLVO LTKSAPDYLVO LTKTAPDYLVO LTKTAPDYLV	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ALVNWLVEHGIT *LV*WLV*+GIT 290 GPAPPADIKTNR GPAPPADIKTNR GSNPPEDITKNR GSNPPEDITKNR GQQPVEDISSNR GQQPVEDISSNR GSSVPEDISKNR G::**+DI::NR 350 AIAHAVPFYGCV	240 SEK SEK SEK SEK SEK SEK SEK SEK 300 LIYR LIYR LIYR LIYR LIYR LIYR LIYR LIYR	240 240 240 240 240 236 300 300 300 300 300 360 360 360 360 3
234567C 1234567C 123456	NLAERKRLVAQHLTHVS NLAERKRLVAHDLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLAERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLTERKRLVAQHLTHVS NLEERKRLVAQHLTHVS NLEERKRLVAY+L**S 250 QWIQEDQASYISFNAAS. LUELNGYDPAYAGSVFL ILELNGYDPAYAGSVFL ILELNGYDPQYAASVFL ILELNGYDPQYAASVFL ILELNGYDPQYAASVFL ILELNGYDPQYAASVFL ILELNGYDPQYAASVFL	QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QTQEQNKENI QRS-QEAASI Q****Q***** 260 NSRSQIKAAI GWAQKRFGKI GWAQKRFGKI GWAQKKFGKI GWACKFGKI	210 LNPNSDAPVI LNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNPNSDAPVI QNEFSADPVI +***S**PVI 270 LDNAGKIMAI LDNAGKIMAI LDNASKIMSI LDNASKIMSI LDNASKIMSI LDNATKIMSI LONATKIMSI LONATKIMLFGPI RNTIWLFGPI	220 IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IRSKTSARYMI IKSKTSARYMI 280 LTKSAPDYLVO LTKSAPDYLVO LTKTAPDYLVO LTKTAPDYLV	230 ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ELVGWLVDRGIT ALVNWLVEHGIT *LV*WLV*+GIT 290 GPAPPADIKTNR GPAPPADIKTNR GSNPPEDITKNR GSNPPEDITKNR GQQPVEDISSNR GQQPVEDISSNR GSSVPEDISKNR G::**+DI::NR 350 AIAHAVPFYGCV	240 SEK SEK SEK SEK SEK SEK SEK SEK 300 LIYR LIYR LIYR LIYR LIYR LIYR LIYR LIYR	240 240 240 240 240 236 300 300 300 300 300 360 360 360 360 3

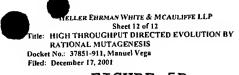


FIGURE 5B

	370 380	390	400	410	420	
1	NENFPFNDCVDKMVIWWEEGKM	TAKVVE S AKAI	LGGSKVRVDO	KCKSSAOIDP	TPVIVTS	420
2	NE NF PF N DC V DKMVI W WEEG K M					420
3	NENFPFNDCVDKMVIWWEEGKM					420
4	NE NF PF N DC V DKMVI W WEEG K M					420
5	NE NF PF N DC V DKMVI W WEEG K M	TAKVVE S AKAI	LGGSKVRVDO	KCKSSAÕIDP	TPVIVTS	420
6	NE NF PF N DC V DKMVI W WEEG K M	TAKVVE <i>S</i> AKAI	LGGSKVRVDÕ	KCKSSAÕIDP	TPVIVT <i>s</i>	420
7	NENFPFNDCVDKMLIWWEEGKM					416
C	NENFPFNDCVDKM*IWWEEGKM	T*KVVESAKAI	LGGSKVRVDQI	KCK S S*Q I +*:	r pvivt <i>s</i>	
			-	_		
	430 440	450	460	470	480	
1	NTNMCAVIDGNSTTFEHQQPLQ	DRMFKFEL T RR	LEHDFGKVTK	QEVKEFFRWA	VETVHQQ	480
2	NTNMCAVIDGNSTTFEHQQPLQ	DRMFKFEL T RR	LEHDFG K V T K	QEVKEFFRWA	VATVH	480
3	NTNMCAVIDGNSTTFEHQQPLQ	DRMFKFELTRR	LDHDFG K V T K	QEVKDFFRWA:	SDHVTDV	480
4	NTNMCAVIDGNSTTFEHQQPLQ	DRMFKFEL T RR	LDHDFG K V T K	EVKDFFRWA	SDHVTDV	480
5	NTNMCAVIDGNSTTFEHQQPLQ	DRMFKFEL T KR	LEHDFG K V T K	EVKDFFRWA	SDHVTEV	480
6	NTNMCAVIDGNSTTFEHQQPLQ	DRMFKFEL T RR	LDHDFG K V T K	DEVKDFFRWA	KDHVVEV	480
7	NTNMCVVVDGNSTTFEHQQPLE	DRMFKFEL T KR	LPPDFGKITK	EVKDFFAWA:	KVNQVPV	476
С	NTNMC*V*DGNSTTFEHQQPL*	DRMFKFELT+R	L:*DFG <i>K</i> * T K	EVK+FF*WA	:***+:V	
	490 500			510	520	
1	AHEFYVRKGGANKRPAPDDADK					522
2	AHEFYVRKGGANKRPAPDDADK	SEPKRA		CP <i>SV</i> ADP.	<i>STSD</i> AEG	522
3	AHEFYVRKGGAKKRPASNDADV	SEPKRQ		CT <i>S</i> LAQP	I <i>TSD</i> AEA	522
4	AHEFYVRKGGAKKRPASNDADV					522
5	THEFYVRKGGARKRPAPNDADI	SEPKRA		CP <i>SV</i> AQP	S <i>TSD</i> AEA	522
6	EHEFYVKKGGAKKRPAPSDADI	SEPKRV		RE <i>SV</i> AQP	S <i>TSD</i> AEA	522
7	THEFKVPRELAGTKGAEKSLKR	PLGDVTNTSYK	SLEKRARLSF	PETPRSSDV	TVDP APL	536
С	:HEF*V+**A:***A::***.	****:		+:*:*:*	:***A*:	
			,			
	530 540	550	560	570	580	
1	APVDFADRYQNKCSRHAGMLQM					580
2	APVDFADRYQNKCSRHAGMLQM					580
3	P-ADYADRYQNKCSRHVGMNLM					581
4	P-ADYADRYQNKCSRHVGMNLM		~	-	~	581
5	P-VDYADRYQNKCSRHVGMNLM	LFPCRQCERMN	QNVDI CFTHG	/MDCAECFP-	VSESQPV	580
6	S-INYADRYQNKCSRHVGMNLM					579
7	RPLNWNSRYDCKCDYHAQFDNI			~		588
С	:::+:**RY**KC**H:**::*	***C::CE**N	*::*:C**H*	::*C.*C**.	.::+:::	
-	590 60	_	620			
1	PVVRKRTYRKLCAIHHLLGRAP		~			623
2	PVVRKRTYRKLCAIHHLL G RAP	_	~			623
3	SVVKKKTYQKLCPIHHILGRAP	_	~			624
4	SVVKKKTYQKLCPIHHILGRAP					624
5	SVVRKRTYQKLCPIHHIMGRAP					623
6	VSVVKKAYQKLCYIHHIMG-KV					621
7	I					610
C	:+*:*:+*:***:***::*+++	+:**+**+*:*	*U*DU*::EQ			